Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for reducing lock contention of concurrent transactions on a plurality of rows of a table in a relational data base system in response to a database query having a set of predicates, the method comprising the steps of:

(a) scanning all rows of the table within an access range determined by the query, wherein the scanning step (a) further comprising the step of:

(a1) accessing the rows of the table with uncommitted read semantics, wherein ~~irrespective of~~ the accessing is performed through any current locks on the rows;

(b) evaluating each scanned row to determine whether the row satisfies the set of predicates, wherein the step of evaluating (b) includes ~~further comprises the steps of:~~

~~(b1) evaluating each row to determine whether it satisfies the set of predicates of the query; and~~

(b1) determining that a particular row does not satisfy the set of predicates of the query; and

(b2) skipping the particular row, including skipping the particular row when a lock is currently held on the particular row and an update on the particular row is being performed while the lock is held, and continuing the scan ~~if the row does not satisfy the set of predicates of the query irrespective of a current lock on the row; and~~

~~(c) returning the row if it satisfies the set of predicates of the query.~~

2. (Canceled)

3. (Canceled)

4. (Currently amended) The method of claim ~~1~~ 25, wherein the returning step ~~(e)~~ (b3) further comprises the steps of:

      ~~(e1)~~   requesting a lock on the row <u>that satisfies the set of predicates</u>;

      ~~(e2)~~   suspending the scan, if the requested lock is refused;

      ~~(e3)~~   repeating the request for a lock and re-evaluating the row when the lock is permitted; and

      ~~(e4)~~   returning the row if the row still satisfies the set of predicates of the query.

5. (Currently amended) The method of claim 4, wherein the returning step ~~(e)~~ (b3) further comprises the step of:

      ~~(e5)~~   releasing the lock, skipping the row, and continuing the scan if the row no longer satisfies the set of predicates of the query.

6. (Currently amended) The method of claim ~~1~~ 25, wherein the returning step ~~(e)~~ (b3) further includes the step of :

      ~~(e1)~~   returning the row as a result set.

7. (Currently amended) The method of claim ~~1~~ 25, wherein the returning step ~~(e)~~ (b3) further

includes the step of:

(c1) returning the row if the row is a committed row.

8. (Original) The method of claim 1, wherein the database query is a SQL statement.

9. (Currently amended) An apparatus for reducing lock contention of concurrent transactions on a plurality of rows of a table in a relational data base system in response to a database query having a set of predicates, comprising:

means for scanning all rows of the table within an access range determined by the query, wherein means for scanning further comprising:

means for accessing the rows of the table with uncommitted read semantics irrespective of, wherein the accessing is performed through any current locks on the rows;

means for evaluating each scanned row to determine whether the row satisfies the set of predicates, wherein the means for evaluating includes further comprising:

means for evaluating each row to determine whether it satisfies determining that a particular row does not satisfy the set of predicates of the query; and

means for skipping the particular row, including skipping the particular row when a lock is currently held on the particular row and an update on the particular row is being performed while the lock is held, and continuing the scan if the row does not satisfy the set of predicates of the query irrespective of a current lock on the row; and means for returning the row if it satisfies the set of predicates of the query.

10. (Canceled)

11. (Canceled)

12. (Currently amended) The apparatus of claim ~~9~~ 26, wherein the means for returning further comprising:

means for requesting a lock on the row;

means for suspending the scan, if the requested lock is refused;

means for repeating the request for a lock and re-evaluating the row when the lock is permitted; and

means for returning the row, if the row still satisfies the set of predicates of the query.

13. (Original) The apparatus of claim 12, wherein the means for returning further includes means for releasing the lock, skipping the row, and continuing the scan, if the row no longer satisfies the set of predicates of the query.

14. (Currently amended) The apparatus of claim ~~9~~ 26, wherein the returned row is returned as a result set.

15. (Currently amended) The apparatus of claim ~~9~~ 26, wherein the row returned is a committed row.

16. (Original) The apparatus of claim 9, wherein the database query is a SQL statement.

17. (Currently amended) A computer readable medium containing programming

instructions for reducing lock contention of concurrent transactions on a plurality of rows of a table in a relational data base system in response to a database query having a set of predicates, the programming instructions for:

(a) scanning all rows of the table within an access range determined by the query, wherein the scanning instruction (a) further comprising the instruction for:

(a1) accessing the rows of the table with uncommitted read semantics, wherein ~~irrespective of~~ the accessing is performed through any current locks on the rows;

(b) evaluating each scanned row to determine whether the row satisfies the set of predicates, wherein the instruction for evaluating (b) further comprises the instructions for:

~~(b1) evaluating each row to determine whether it satisfies the set of predicates of the query; and~~

(b1) determining that a particular row does not satisfy the set of predicates of the query; and

(b2) skipping the particular row, including skipping the particular row when a lock is currently held on the particular row and an update on the particular row is being performed while the lock is held, and continuing the scan ~~if the row does not satisfy the set of predicates of the query irrespective of a current lock on the row; and~~

~~(c) returning the row if it satisfies the set of predicates of the query.~~

18. (Canceled)

19. (Canceled)

20. (Currently amended) The computer readable medium of claim ~~17~~ 27, wherein the returning instruction ~~(e)~~ (b3) further comprises the instructions for:

~~(e1)~~   requesting a lock on the row;

~~(e2)~~   suspending the scan, if the requested lock is refused;

~~(e3)~~   repeating the request for a lock and re-evaluating the row when the lock is permitted ; and

~~(e4)~~   returning the row if the row still satisfies the set of predicates of the query.

21. (Currently amended) The computer readable medium of claim 20, wherein the returning instruction ~~(e)~~ (b3) further comprises the instructions for:

~~(e5)~~   releasing the lock, skipping the row, and continuing the scan if the row no longer satisfies the set of predicates of the query.

22. (Currently amended) The computer readable medium of claim ~~17~~ 27, wherein the returning instruction ~~(e)~~ (b3) further includes the instruction for:

~~(e1)~~   returning the row as a result set.

23. (Currently amended) The computer readable medium of claim ~~17~~ 27, wherein the returning instruction ~~(e)~~ (b3) further includes the instruction for:

~~(e1)~~   returning the row if the row is a committed row.

24. (Original) The computer readable medium of claim 17, wherein the database query is a

SQL statement.

25. (New) The method of claim 1 wherein the step of evaluating (b) includes

(b3) determining that a row satisfies the set of predicates of the query, and

returning the row.

26. (New) The apparatus of claim 9 wherein the means for evaluating includes means for

determining that a row satisfies the set of predicates of the query, and for returning the row.

27. (New) The computer readable medium of claim 17 wherein the instruction of evaluating

(b) includes instructions for:

(b3) determining that a row satisfies the set of predicates of the query, and

returning the row.